REMARKS/ARGUMENTS

Reconsideration of the above-identified patent application is respectfully requested in view of the foregoing amendments and the following remarks. Claims 1, 3, 5, 7, and 11 have been amended. Claim 13 has been added. Claims 1 - 13 remain in the application.

The specification was amended to correct typographical errors and to more clearly describe the background of the invention and the subject matter Applicant considers his invention. All substantive changes are supported within Applicant's previously-issued United States Patent No. 4,771,466 which is included by reference within the instant application. The Examiner is directed specifically to the material in Column 4, lines 65 - 69; Column 6, lines 29 - 45; and Column 12, line 20 to Column 13, line 47 of the '466 patent. Consequently, no new matter has been added.

Claims 1 - 6 were rejected under 35 U.S.C. §112, second paragraph as being indefinite and failing to particularly point out the subject matter Applicant considers his invention. Specifically, the term "substantially infinite" was objected to by the Examiner. The term substantially infinite has been replaced by effectively infinite, a term now clearly defined as having a filter edge amplitude response of at least 40 dB/octave. The amendment of claims 1 and 5 overcomes their rejection under 35 U.S.C. §112, second paragraph. The rejection of claims 2 - 4, and 6 depending therefrom is also now overcome.

Claims 1, 2, and 7 were rejected under 35 U.S.C. §102(b) as being anticipated by United States Patent No. 5,937,072 for AUDIO CROSSOVER CIRCUIT, issued April 10, 1999 to Christopher E. Combest. COMBEST teaches an audio crossover network circuit which produces relatively steep (e.g., 30 dB/octave) filter slopes. 30 dB/octave fails to meet Applicant's definition of infinite slope, effectively infinite slope, quasi-infinite slope, etc., Applicant's definition being at least 40 dB/octave, more preferably 70 dB/octave, and, in the best embodiments of Applicant's techniques, up to 120 dB/octave. Note that these slopes are supported in Applicant's '466 patent at Column 12, line 66 to Column 13, line 46 as well as in the instant specification, for example page 11, lines 1 - 4.

Claim 1 has been amended to positively recite that the low pass (i.e., woofer) portion of the crossover network contains "a pair of mutually-coupled coils so as to generate a transmission zero in said low-pass filter frequency response and an effectively infinite upper frequency slope." COMBEST neither teaches nor suggests such a structure. Indeed, the limited 30 dB/octave slope achieved by the COMBEST arrangement proves that point. Were COMBEST to implement the teaching of Applicant's '466 patent in its entirety, much higher slopes might possibly be obtained.

A circuit analysis, specifically a pole-zero plot of the transfer function of the woofer portion of the COMBEST circuit would NOT show poles and/or zeros as described and claimed by Applicant. Specifically, no transmission zero would be found in the pass band of the COMBEST low-pass filter section, proof positive that Applicant's filter structure as described and now claimed differs significantly from that of COMBEST.

The amendment of claims 1 and 7 overcomes their rejection under 35 U.S.C. §102(b) as being anticipated by COMBEST. Likewise, the rejection of claim 2 depending from claim 1 is now overcome.

Claims 3 - 6 and 8 - 10 were rejected under 35 U.S.C. §103(a) and being unpatentable over COMBEST in view of United States Patent No. 4,771,466 for MULTIDRIVER LOUDSPEAKER APPARATUS WITH IMPROVED CROSSOVER FILTER CIRCUITS, issued September 13, 1988 to Richard Modafferi. MODAFFERI teaches a fundamental brick wall, infinite slope speaker crossover network.

With regard to claim 3, COMBEST fails to teach or suggest a constant resistance network having the series combination of a parallel L-C and R-C networks but wherein one or both resistive elements are replaced by low-pass and/or high-pass filter networks as disclosed and now claimed by Applicant. Neither is such a network taught or suggested in Applicant's original patent (MODAFFERI). Consequently, the amendment of claim 3 to recite the exact circuit topology disclosed and claimed overcomes the obviousness rejection thereof.

With regard to claims 3 - 6, Applicant believes that the amendment of claim 1 so completely defines over COMBEST that even adding MODAFFERI fails to obviate claims 3 - 6 which are seen to merely recite additional limitations to allowable subject matter.

Likewise, the amendment of claim 7 is seen to overcome the rejection of claims 8 - 10 as being obvious over COMBEST in view of MODAFFERI.

Claims 11 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over MODAFFERI in view of United States Patent No. 5,530,770 for MULTIPLE OUTPUT TRANSFORMERS NETWORK FOR SOUND REPRODUCING SYSTEM, issued June 25, 1996 to Man H. Kim. KIM displaces the traditional output transformers of a tube-type audio power amplifier to a location near the loudspeaker. By doing this, a relatively high-impedance, low current connection may be used to interconnect the loudspeaker and the amplifier. The Examiner states that KIM uses a transformer when in fact, electrically speaking, KIM does no such thing. As previously stated, KIM displaces the traditional output transformer universally used with tube equipment from the amplifier site. As may be seen in FIGURE 1, Kim in fact uses traditional inductive elements (not specifically identified by reference numbers) as a portion of a high-pass filter 36 and a low-pass filter 38, respectively. As far as Applicant can determine, there is no electromagnetic interaction between KIM's unidentified inductive elements and the output transformers 22 and 24. The teaching of KIM has nothing whatsoever to do with either poles and zeros or with the unique constant impedance network provided by the present invention. Certainly, there would be absolutely no motivation to combine the teaching of KIM with that of MODAFFERI.

The amendment of claim 7 overcomes the rejection of claims 8 - 10 under 35 U.S.C. §103(a) over MODAFFERI in view of KIM.

Applicant believes that, as amended, claims 1 - 13 are now allowable and respectfully requests that a timely Notice of Allowance be issued in this case.

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On 3/2/05
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